

What is claimed is:

1. A method for controlling an optical power level, comprising the steps of:

a) regularly increasing a control value of a driving signal generator for driving a pickup unit adapted to output an optical power;

b) checking a driving signal of the driving signal generator according to the increasing control value; and

c) setting a control value at which the driving signal begins to be generated as an offset value for setting up an optical power.

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2. The method as set forth in claim 1, wherein the driving signal of the driving signal generator is applied to a laser diode of the pickup unit, and a magnitude of the optical power is determined by a level of the driving signal.

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3. The method as set forth in claim 1, wherein the offset value is stored in a nonvolatile memory.

4. The method as set forth in claim 1, wherein the offset value is determined when an optical disc apparatus to which the method as set forth in claim 1 will be applied is initially driven.

5. The method as set forth in claim 1, wherein the step (c) includes the steps of:

c1) determining a control value at which the driving signal of the driving signal generator reaches a predetermined signal level; and

c2) subtracting a predetermined value from the determined control value, and setting the subtracted result value as the offset value.

5 6. The method as set forth in claim 5, wherein the predetermined signal level is within a threshold area of the driving signal of the driving signal generator.

7. The method as set forth in claim 1, further comprising the
10 step of:

d) calculating a control value for generating a driving signal of the pickup unit on the basis of the offset value.

8. The method as set forth in claim 7, wherein the step (d) includes
15 the steps of:

d1) measuring a driving signal level of the driving signal generator in response to a predetermined control value; and

d2) calculating a control value for generating a specific driving signal level based on the predetermined control value, the measured
20 driving signal level in response to the predetermined control value, and the offset value.

9. The method as set forth in claim 8, wherein the control value for generating the specific driving signal level in the step (d2)
25 is calculated by the following equation:

$$DAC_{DSL} = DAC_{offset} + \frac{DSL}{DSL_1} \times (DAC_1 - DAC_{offset}) ,$$

where DSL is a driving signal level of the driving signal generator applied to the laser diode, DAC_{DSL} is a control value for generating a value of DSL, DAC_{offset} is an offset value, a DAC_1 is a predetermined control value, and a DSL_1 is a driving signal level in response to a value of DAC_1 .

10. The method as set forth in claim 7, wherein a control value for generating a predetermined driving signal level is previously stored in a nonvolatile memory in the form of a difference between the control value and an offset value for setting up an optical power.

11. The method as set forth in claim 10, wherein the step (d) comprises the step of:

15 d3) calculating a control value for generating a specific driving signal level based on the offset value determined at step (c) and the difference stored in the nonvolatile memory.

12. The method as set forth in claim 10, wherein the predetermined driving signal level is a pickup driving signal level for generating a specific optical power value used for either one of a data recording mode, a data playback mode, and a disc discrimination mode.